



Washington, D.C.

*People...Partnership...Performance*

August 2003

Our vision: By focusing on **People** working collaboratively in full **Partnership**, we will achieve **Performance** for "Keeping the U.S. Coast Guard the world's best ...properly equipped and fully prepared to meet every maritime challenge of the 21st Century."

## **HAPPY 213th BIRTHDAY UNITED STATES COAST GUARD!**



Homeland Security Secretary Tom Ridge recognized the Coast Guard's 213th birthday during a ceremony at Coast Guard headquarters in Washington, D.C. August 6, 2003. "Clearly we're extremely fortunate to have such a veteran player in the Coast Guard that makes up a vital part of the new team," Ridge said. "Your expertise and your experience, and your mindset and your 'can-do' attitude garnered from more than two centuries of work to secure our ports and protect our nation's waters has been an invaluable resource in the fight against terrorism." Secretary Ridge told the audience that with its expanded mission, the President has asked Congress for the largest increase ever in Coast Guard funding. That money will be used for better equipment and to acquire the new Defender-class response boats and to support the Integrated Deepwater System. Ridge said that the Coast Guard has protected the American people by securing waterways and ensuring the free flow of commerce for 213 years and "...you have done so with a tireless determination and dogged devotion to preserve the tenets of democracy and freedom for which our country stands." The ceremony concluded with Secretary Ridge presenting several military decorations to Coast Guardsman and to Coast Guard units for their performance during Operation Iraqi Freedom earlier this year.

### August 4, 1790

**Congress authorized building of the first "ten boats" establishing the Revenue Cutter Service. The history of the Coast Guard begins.**



Homeland Security Secretary Tom Ridge speaks to Coast Guard Commandant Admiral Thomas H. Collins aboard a 47-foot motor-lifeboat from Coast Guard Station Barnagat Light, N.J., while underway on the Potomac River after the ceremony celebrating the 213th birthday of the Coast Guard in Washington D.C., on August 6.

### **INSIDE THIS ISSUE:**

**DEEPWATER UPDATE: Bofors Mk 3 / 57mm Gun Mount**

2

**"Whether we're rescuing mariners in distress or protecting our nation from those who would harm our people and our ports, we take great pride -- I know you take great pride -- in our 213 year history service to our nation."**

**~ADMIRAL THOMAS H. COLLINS — AUGUST 6, 2003**



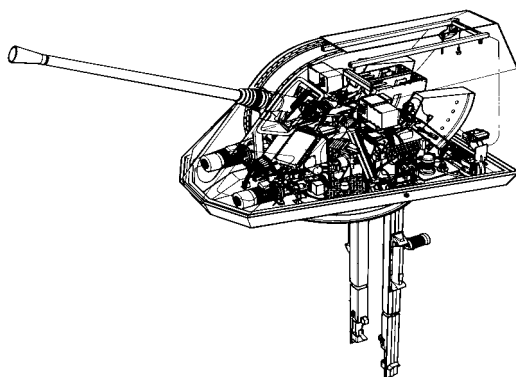
## The Bofors Mk 3 / 57mm Gun Mount

By LT Tim Hackett

The National Security Cutter (NSC) System Performance Specification identifies multiple requirements for limited general defense operations. The requirements include: operating in a low-threat environment, ability to fire warning and disabling shots against targets of interest, engaging surface threats achieving mission kill on high speed coastal patrol craft and employing hard kill capability in self defense from anti-ship cruise missiles. To meet these requirements, Integrated Coast Guard Systems (a partnership of Lockheed Martin and Northrop Grumman) has proposed the Bofors Mk 3 / 57mm Gun Mount.

The Bofors Mk 3 / 57mm Gun Mount (Mk 3) is an intermediate caliber gun capable of firing 220 rounds per minute. The 57-mm gun is based mechanically on the 57-mm MK 2, which has been in service with North Atlantic Treaty Organization (NATO) vessels for over 10 years. The 57-mm MK 3 is designed to interface with digital computer systems that provide improved features that increase its combat effectiveness. These include the capability to set and program the multifunction 3P fuzed combat ammunition. The 57-mm gun is fully automatic and unmanned. The gun has a fully automatic ammunition loading system containing 120 rounds ready to fire in the mount cupola. It fires electrically primed ammunition at a rate of 220 rounds per minute. The loading system is divided into two sections to provide for two different types of ammunition, with instantaneous switching between the two. The gun system has fixed-muzzle-velocity radar that supplies projectile muzzle velocity data to the fire control computer for improving ballistics calculations.

The major advantage of the Mk 3 Gun Mount is its capability to fire the Bofors 3P Ammunition. 3P is an acronym for Pre-fragmented Programmable Proximity fuzed ammunition. The 57-mm 3P ammunition is a pre-fragmented, 6-mode programmable, proximity-fuzed, all-target type of round. The 57-mm 3P round is designed for firing in the Bofors 57-mm Mk 3 automatic gun for combating aerial, surface, and ground targets. 3P ammunition gives the Mk 3 Gun increased tactical flexibility and ammunition effect.



**The Bofors Mk 3 / 57mm Gun Mount**

The complete 57mm / 3P round consists of the following main components:

- A 6-mode programmable fuze.
- A pre-fragmented shell body with approximately 2,400 pre-formed tungsten fragments and 420 grams of PBX explosive.
- A brass cartridge case with low vulnerability ammunition (LOVA) propelling charge and an electric primer.

In October 2002, the USCG & NAVSEA teamed up to test and evaluate the Bofors Mk 3 / 57mm Gun Mount. NAVSEA received a \$2.1M plus-up to review the Gun Weapon System (GWS) for the USCG's Deepwater Project. During the evaluation phase, GMC Joe Washabaugh and GM1 William Pike attended a three-week Mk 3 introduction, operation and maintenance course. This was a great opportunity for the Coast Guard and the evaluation team. GMC Washabaugh and GM1 Pike's review of the gun enabled the team to get a "deck plate sailor's" opinion. Overall the two gunner's mates gave very positive comments and technical feedback to the team. Their combined opinion of the gun is "an excellent weapon for use in the Coast Guard. I hope we get the chance to use these (Mk 3 Guns) in the field".

In FY 03, the USCG/USN Team established the Deepwater Gun Integrated Product Team (IPT). The primary purpose of the Gun IPT is to certify the Mk 3 Gun and Ammunition. An additional \$11M has been received from NAVSEA to achieve that goal. The complete

Mk 3 / 57mm GWS will be certified to USN Standards. To accomplish this goal, the Deepwater Gun IPT is scheduled to present the Mk 3 / 57mm GWS to the Weapon System Explosive Safety Review Board (WSERB) on 09 September 2003. This will be the first time the Coast Guard will be introducing a Gun Weapon System (GWS) to the WSESRB since its establishment in 1967.

*LT Hackett is a former Chief Warrant Officer (Weapons). He has served aboard the Cutters VENTUROUS (WMEC 625), MIDGETT (WHEC 726), SPENCER (WMEC 905) and BOUTWELL (WHEC 719). His weapons background includes the Mk 56 GFCS, Mk 92 FCS, Mk 75/76mm Intermediate Gun, and Mk 15 Close-In – Weapon System. LT Hackett is the Combat Systems Lead for the Deepwater Sponsor's Representative Office (G-OCD).*

### **BOFORS Mk 3 / 57mm GUN** **PERFORMANCE PARAMETERS**

Total weight (excl. ammunition)	7.5 tons
Magazine Capacity	120 rounds
Working diameter	8650 mm
Power Requirements	3x440 V 60 Hz
Life of Barrel	>4000 rounds
Field of Elevation	-10° to + 77°
Field of training	unlimited
Rate of Fire	220 rounds/min
Muzzle Velocity	1020 m/s PFHE, 950 m/s HCER
Gyro stabilized in local control	
Electro-hydraulic laying system permits continuous operation	